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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/777,362	Applicant(s) SPOTWOOD, MARK	
	Examiner ZHENG WEI	Art Unit 2192	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 December 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6, 10-16, 20-26 and 30-39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 10-16, 20-26 and 30-39 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 December 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>12/04/2007</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Remarks

1. This office action is in response to the amendment filed on 12/04/2007.
2. Claims 7-9, 17-19 and 27-29 have been canceled.
3. Claims 1, 3, 10, 11, 13, 14, 16, 20, 21, 23, 24, 26 and 30 have been amended.
4. Claims 31-39 have been added.
5. The objection to the drawings is withdrawn in view of the Applicants filed replacement sheets.
6. The objection to the specification is withdrawn in view of the Applicants amendment.
7. The objection to the claims 3, 6-30 is withdrawn in view the Applicants' amendment
8. The objection to the claims 7, 17 and 27 is withdrawn in view of the Applicants' cancellation.
9. Double patenting rejection to claims 1, 10, 11, 20, 21 and 30 is withdrawn in view of the Applicants amendment.
10. Claims 1-6, 10-16, 17-26 and 30-39 remain pending and have been examined.

Oath/Declaration

11. The Oath/Declaration filed on 12/04/2007 has been accepted and put in the application file. Therefore, the objection is withdrawn.

Information Disclosure Statement

12. The information disclosure statements filed on 09/27/2007 has been placed in the application file and the information referred to therein has already been considered.

Response to Arguments

13. Applicant's arguments filed on 12/04/2007, in particular on pages 11-14, have been fully considered. However, the amendment changes the scope of the claims, therefore a new ground of rejection is applied.

Claim Objections

14. Claims 33, 36 and 39 are objected to because of the following informalities:
Claims 33, 36 and 39 recite an alternative term "classloader-structure" which is not consistent with the term "class-loader structure" as recited in previous claims 31, 34 and 37.
Appropriate correction is required.

Claim Rejections - 35 USC § 112

15. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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16. Claims 32, 35 and 38 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 32, 35 and 38 recite the limitation "said subset" in line 2. There is insufficient antecedent basis for this limitation in the claim. For the purpose of compact prosecution, the Examiner treats "said subset" as --subset of the plurality of modules and classes--

Claim Rejections - 35 USC § 103

17. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

18. Claims 11-13, 20 and 34-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kumar (Kumar et al., US 7,039,923) in view of Allaramaju (Allaramaju et al., Professional Java Server Programming J2EE 1.3 edition)

Claim 11:

Kumar discloses a method for loading application components, comprising the steps of:

- providing an application server with a software application thereupon, wherein said software application has a plurality of modules and classes associated

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- therewith (*see for example, col.8, lines 29-40, "J2EE application", "EJBs" and related description*);
- associating an hierarchical relationship with said software application to determine the hierarchy of modules and classes of the software application to be loaded in the application server (*see for example, col.5, lines 26-28, "a transformation of the hierarchical relationship may be performed in generating the hierarchical stack of class loaders"*)
 - parsing/determining, recognizing the modules and classes specified therein, and retrieving those modules and classes from a computer readable medium in a manner consistent with the tag layout in the configuration files (*see for example, col.5, lines 26-28, "a transformation of the hierarchical relationship may be performed in generating the hierarchical stack of class loaders"; also see Fig.15, step 300, 302; also see Fig.15, step 308, "use the hierarchical stack of the class loaders to reload changed classes and classes dependent on the changed classes" and related text*);

wherein upon receiving a request to load the modules and classes of the software application and to create a hierarchical class loader. (*see for example, Fig.15, step 306, "Generate a hierarchical stack of the class loaders"; step 308, "use the hierarchical stack of the class loaders to reload changed classes and classes dependent on the changed classes" and related text*).

but does not explicitly disclose using an application configuration file with said software application, wherein said configuration file includes a tag layout and

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application class-loader structure elements that determine the hierarchy of modules and classes of the software application to be loaded in the application server. However, Allaramaju in the same analogous art of Java server programming J2EE discloses using deployment descriptor file (application.xml, an application configuration file) (see for example, p.12, section "Working with the EAR Deployment Descriptor ", e.g. tag <module>, <web>; p.17-18, section "Issues with the ordering of Modules"; p.23, example of application .xml deployment descriptor). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use application descriptor to specify the order of EJB modules or web application modules as suggested by Allaramaju (see for example, p.17-18, section "Issues with the ordering of Modules").

Allaramaju further discloses constructing an application container at the application server with the classes and modules, in the order in which the classes and modules were retrieved (run time containers) (see for example, p.2, run time containers; EJB container, Web container...) which is clarified/defined by the J2EE specification. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to construct the application container at the application server at run time as required by the J2EE specification.

Claim 12:

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Kumar also discloses the method of claim 11 further comprising a user interface that allows a software developer to specify a subset of said modules to be deployed (*see for example, col.12, lines 16-43, "In other embodiments, the method may be implemented as a user controlled process, for example by providing a graphical user interface (GUI)..."*).

Claim 13:

Kumar further discloses the method of claim 11 wherein said modules are any of Enterprise Java Bean components, classes, or implementations (*see for example, col.8, lines 29-40, "EJBs" and related description*).

Claim 20:

Kumar further discloses the method of claim 11 wherein the server provides multiple EJB software applications, each with their own hierarchy of classloaders (*see for example, Fig.11, Class loader 204A, 204B, 204C and related text*).

Claim 34:

Allaramaju further discloses the method of claim 11 wherein the application class-loader structure allows for nesting of one or more application class-loader structure elements, and wherein the outermost element of the application class loader structure indicates the application class-loader (*see for example, p.23 the example of the application .xml deployment descriptor and related text*)

Claim 35:

Kumar also discloses the method of claim 11 wherein the system allows a software developer to specify a redeploy command that instructs the system that said subset should be redeployed, wherein said redeploy command specifies an enterprise software application name and a module associated with the application, and wherein said redeploy command includes a list of modules relative to the root of the application to be deployed, for redeployment of said modules (see for example, Fig.15, step 306, step 308 and related text).

Claim 36:

Allaramaju further discloses the method of claim 11 wherein the application server supports multiple software applications, each with their own hierarchy of application classloader-structure elements (see for example, p.10, section "The Structure of a J2EE Package", p.15, example of application .xml, <ejb>, <web>...)

19. Claims 1-6, 10, 14-16, 21-26, 30-33 and 37-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kumar (Kumar et al., US 7,039,923) in view of Allaramaju (Allaramaju et al., professional Java Server Programming J2EE 1.3 edition) and in further view of Susarla (Susarla et al., US 6,915,511)

Claim 14:

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Kumar and Allaramaju disclose the method of claim 12, but do not explicitly disclose wherein said user interface allows the software developer to specify a redeploy command that instructs the method that said subset should be redeployed, wherein said redeploy command specifies an EJB software application name and a module associated with the application. However, Susarla in the same analogous art of dynamic class reloading mechanism discloses redeploy command (see for example, col.14, line 55- col.15, line 17). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to specify the redeploy command to redeploy classes as configured GUI interface in Kumar. One would have been motivated to do so to load or reload classes for the particular application as suggest by Kumar (see for example, col.9, lines 5-10)

Claim 15:

Kumar, Allaramaju and Susarla disclose the method of claim 14, Susarla further discloses wherein said redeploy command includes a list of modules relative to the root of the application to be deployed, for redeployment of said modules (see for example, col.15, line 10, "loadClass (String className, string moduleName) public method" and related description")

Claim 16:

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Kumar further discloses wherein the module is any of EJB components, class, or implementations (see for example, *col.8, lines 29-40, "EJBs" and related description*).

Claims 1-6, 10 and 31-33

Claims 1-6, 10 and 31-33 are system version for performing the claimed method as in claims 11-16, 20 and 34-36 addressed above, wherein all claimed limitation functions have been addressed and/or set forth above and certainly a computer system would need to run and/or practice such function steps disclosed by reference above. Thus, they also would have been obvious.

Claims 21-30:

Claims 21-26, 30 and 37-39 are computer program products version of the claimed method, wherein all claimed limitation functions have been addressed in claims 11-16, 20 and 34-36 above respectively. It is well known in the computer art that such method steps can be implemented as computer program and can be practiced and /or stored on a computer operable media. Thus, they also would have been obvious in view of reference teachings above.

Conclusion

20. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

21. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Zheng Wei whose telephone number is (571) 270-1059 and Fax number is (571) 270-2059. The examiner can normally be reached on Monday-Thursday 8:00-15:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Q. Dam can be reached on (571) 272-3695. The

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fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general nature of relating to the status of this application or proceeding should be directed to the TC 2100 Group receptionist whose telephone number is 571- 272-1000.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Z. W./
Examiner, Art Unit 2192

/Tuan Q. Dam/
Supervisory Patent Examiner, Art Unit 2192